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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,637	10/03/2000	Daniel A. Japuntich	48317US SL-031 026	7360

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JAN 07 2001

EXAMINER

LEWIS, AARON J

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 01/02/2002

7

REFERRED TO

Please find below and/or attached an Office communication concerning this application or proceeding.

DATE (3)	04/02/02
BY	KGH pse

Office Action Summary

Application No.
09/677,637

Applicant(s)
DANIEL A. JAPUNTICH ET AL.

Examiner
AARON J. LEWIS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 15, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-54 and 56 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-54 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

Specification

1. The amendment filed 10/15/2001 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: all of the language which was inserted on page 7, line 36 after "(see FIG.3)" as it appears on page 10 (Version With Markings To Show Changes Made) of the amendment 10/16/2001.

Applicant is required to cancel the new matter in the reply to this Office action.

None of, salivary particles and their buildup upon the cross members of the valve cover, the adhesive forces associated with saliva and its interference with the flap's ability to lift from its seal, the amount of force including so called power requirements necessary to lift the valve from its seal, the use of recessed cross members to lower the total area of adhesion and moisture-transfer contact areas, and any effect that each/all of the abovementioned factors contribute to the comfort of the mask are supported by the disclosure as originally filed.

Double Patenting

2. Claims 33-54,56 of this application continue to conflict with claims 34-77 of Application No. 08/240,877; 34-77 of 09/440,619; 33-65 of 09/678,580; 33-62 of 09/678,579; 33-54,56-61

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of 09/678,488; 33-36,38-62,64-66 of 09/677,636. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 33-54,56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al.('516) in view of McKim ('618), Braun ('362) and French patent (1,209,475).

The differences between Simpson et al. and claim 33 are the cross members being slightly recessed beneath the seal surface, the one free portion of the flexible flap having a profile that comprises a curve when viewed from the front, which curve is cut to correspond to the general shape of the seal surface and a valve cover that comprises a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end and having cross members that are disposed within the opening of the valve cover.

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French patent ('475) teaches a valve cover having a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end for the purpose of controlling the direction of fluid flowing through the valve (fig.4).

It would have been obvious to modify the valve (fig.2) of Simpson et al. to provide a valve cover because it would have provided a means for controlling the direction of flow of fluid therethrough as taught by French patent ('475) and which would also have prevented any exhaled gases from being blown upwardly against a wearer's glasses and fogging them.

McKim ('618) teaches a flexible flap having a fixed portion (14a) and a free portion (opposite the fixed portion as illustrated in figs. 1 and 3), the free portion of the flexible flap having a profile that comprises a curve when viewed from the front, which curve is cut to correspond to the general shape of the seal surface. McKim teaches a curved seal surface and curved flexible flap for the purpose of seating quickly, effectively and without float or bounce after each opening (col.1, lines 64-72).

It would have been obvious to modify the flexible flap and seat of Simpson et al. (fig.2) to be curved because it would have provided quick seating, in an effective manner and without float or bounce after each opening as taught by McKim.

Braun, in an exhalation valve for a filtering face mask, teaches cross members (19,20) which are slightly recessed beneath the seal surface (18) for the purpose of increasing the sealing force (col.4, lines 36-41) and cross members (25) that are disposed within the opening of the valve cover for the purpose of protecting the valve against debris (col.4, lines 25-26).

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It would have been obvious to modify the cross members of Simpson et al. (structure through which openings 16 extend) to recess them slightly beneath the seal surface because it would have provided a increased sealing force as taught by Braun.

As to claim 34, the particular material from which the valve seat of Simpson et al. is made and the manner of making the valve seat can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular method of manufacture. It is noted that Simpson et al. (page 2, line 39) discloses the valve flap being made from a plastic material. It is submitted that it would have been obvious to make a plastic valve seat by any well known method of manufacture including injection molding inasmuch as injection molding is a typical method employed in the manufacture of plastic articles.

As to claim 35, the flexible flap of Simpson et al. as modified by McKim would normally assume a flat configuration when not positioned on the valve seat with no forces being applied to it (McKim col.1, lines 64-72) but has a curved profile when viewed from a side elevation (fig.5 of McKim) at rest on the seal surface.

As to claim 36, the flexible flap (15) of Simpson et al. is disclosed as being made of flexible plastic and as such is fully capable of performing the recited function of resisting permanent set and creep.

As to claims 37 and 40, the flexible flaps (15,18) of Simpson et al. are disclosed as being made of plastic and/or rubber for example (page 2, line 39 and line 53). It would have been obvious to make the flexible flap from any well known flexible material including and elastomeric rubber such

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as a polyisoprene as mere substitution of one well known flexible material for another and because elastomeric rubber is a well known material from which to make valve flaps.

As to claims 38 and 39, the degree of a seal between the valve flap and valve sealing surface of Simpson et al. can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular degree of seal including one meeting the standards as set forth in 30 C.F.R. 11.183-2, July 01, 1991. Further, it stands to reason that one of ordinary skill in the art would strive to make the face mask in accordance with at least minimum current government standards of operation including one having a valve flap having a stress relaxation sufficient to keep the flexible flap in an abutting relationship to the seal surface under any static orientation for 24 hrs. at 70 degrees centigrade.

As to claims 41-44, the particular dimensions, the particular material including the hardness of the material of the flexible flap (15,14) of Simpson et al. can be arrived at through mere obvious experimentation and observation with no criticality seen in any particular dimensions nor in any particular constituency.

As to claim 45, the flange against which the valve flap is secured in Simpson et al. (fig.2) is illustrated as being the same 360 degrees around the valve seat.

As to claims 46-48, while Simpson et al. do not address the particular volume of a wearer's exhalation exiting the exhalation valve (12), it is submitted that since the exhalation valve (12) is expressly disclosed as opening in response to a wearer's exhalation, it would have been obvious that the valve would remain opened as long as a wearer is exhaling which would enable most if

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not all of the volume including 60-70% of gas exhaled by a wearer to pass through valve (12) of Simpson et al..

As to claim 49, McKim (fig.5) illustrates the flexible flap exhibiting a curvature when resting on the seal surface and viewed in cross-section from the side.

As to claim 50, the flexible flap of Simpson et al. as modified by McKim is held in position on the valve seat by mechanical clamping (see fig.3 of McKim).

As to claim 51, the shape of the orifice (16) of Simpson et al. does not wholly correspond to the shape of the seal surface inasmuch as the seal surface surrounds the orifice.

As to claim 52, French patent ('475) teaches a valve cover (figs.3 and 4) having an opening in the valve cover which is approximately parallel to the path traced by the second end of the flexible flap during its opening and closing.

As to claim 53, Simpson et al. as further modified by French patent ('475) teach a cover which is fully capable of performing the recited function of directing exhaled downwards when the mask is worn by a person.

As to claim 54, the cover of French patent ('475) as illustrated in figs.3 and 4, shows fluid-impermeable sidewalls.

As to claim 56, the opening in the cover of French patent ('475) is at least the size of the orifice in the valve seat as illustrated in figs.3 and 4.

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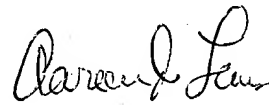
Response to Arguments

5. Applicant's arguments with respect to claims 33-54,56 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron J. Lewis whose telephone number is (703) 308-0716.

Aaron J. Lewis

December 30, 2001

A handwritten signature in cursive script, appearing to read "Aaron J. Lewis".